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ABSTRACT

Through programs aimed at enhancing educational effectiveness, states can play important and substantive roles in helping local schools, students, teachers, and principals improve, according to the study "State Strategies to Support Local School Improvement: Cross Site Analysis." The study identifies the key elements of the local change process that improve the skills of teachers and principals and transform schools into effective organizations. These key elements and their sequencing and linkages form a general implementation structure that schools can adopt for their own implementation efforts. The research used a case study approach to analyze data from 10 states and about 40 schools between 1983 and 1985. The study sought to identify effective state school improvement strategies, the conditions under which state strategies work effectively at the local level, and the methods by which effective strategies work. The effects of the state environment, the local environment, the state program, the local program, and program outcomes were examined. The state programs studied involved both instructional improvement programs and schoolwide improvement programs. This report reviews state and local environmental factors affecting success, then identifies influential variables at four stages of the implementation process: initiation, initial implementation, complete implementation, and institutionalization. The causal network in all four stages is presented in diagram form. (PGD)

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# CAUSAL LINKAGES OF LOCAL SCHOOL VARIABLES ASSOCIATED WITH SUCCESSFUL IMPLEMENTATION OF STATE EDUCATION IMPROVEMENT PROGRAMS

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# CAUSAL LINKAGES OF LOCAL SCHOOL VARIABLES ASSOCIATED WITH SUCCESSFUL IMPLEMENTATION OF STATE EDUCATION IMPROVEMENT PROGRAMS[1]

by

Allan Odden, Beverly Anderson and Eleanor Farrar

Since the late 1970s, and before the current education reform movement, states have been actively engaged in helping districts and schools implement research findings on effective schools, effective teaching and the processes of educational change. This paper reports on a study of the implementation and impact of these programs in local schools.[2]

The basic finding is that states can play several important, substantive roles in helping local schools, and the students, teachers and principals in them, to improve over time. The study identifies the key elements of the local change process that both improve the skills of teachers and principals and transform the school into an effective organization. The study also identifies various roles states can play in the process. The key elements, and their sequencing and linkages over time, provide a general implementation structure that local schools can use to implement programs designed to improve the quality of the local education

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[1]Portions of this paper will appear in Phi Delta Kappan, April 1986, in a series of articles.

[2]A complete report of the study is given in: Beverly Anderson, Allan Odden, Eleanor Farrar, Susan Fuhrman, Alan Davis, Patty Flakus-Mosqueda, Jane Armstrong and Eugene Hubble, State Strategies to Support Local School Improvement: Cross Site Analysis, Denver, Co.: Education Commission of the States, 1985. This study was conducted by the Education Commission of the States (ECS) with funding from the U.S. Department of Education under contract no. 400-83-0028. Support also was provided by the Spencer Foundation. The findings and conclusions do not necessarily reflect the views of ECS, The Department of Education or the Spencer Foundation.

system. Combined with other recent research on successful school improvement efforts, including the Dissemination Efforts Supporting School Improvement study of successful curriculum reform,[3] the ECS findings provide a relatively solid knowledge base on which local and state educators and policymakers can create strategies to implement most of the objectives of current state education reforms.

## I. The Design

The ECS study, State Strategies to Support Local School Improvement, put particular emphasis on three key research questions:

1. What are effective state school improvement strategies?
2. Under what conditions do state strategies work effectively in local schools?
3. How do state strategies work in local schools when effective?

The research used a case study approach to analyze data from 10 states and about 40 schools. The study began in late 1983; field work was completed in early 1985. The study analyzed the effect of five components of the state and local education system on the implementation of the state school improvement program:

1. State environment: the political, demographic, policy and practice characteristics of a state that affect how state school improvement programs are defined and implemented.
2. Local environment: the political, demographic, policy and practice characteristics of districts and schools that affect the

[3]David Crandall and Associates, People, Policies and Practices: Examining the Chain of School Improvement, Andover, Mass.: The Network, Inc., 1983; and A. Michael Huberman and Matthew B. Miles, Innovation Up Close, New York: Plenum Press, 1984.

implementation of improvement within schools. Included are the activities and characteristics of local (usually central-office) staff who help schools change.

3. State program: the school improvement program as the state intended it to operate, including the strategies the state used to promote the effects desired in schools.

4. School program: the school improvement program as it actually existed in schools and the actual methods states or their agents use to help schools change.

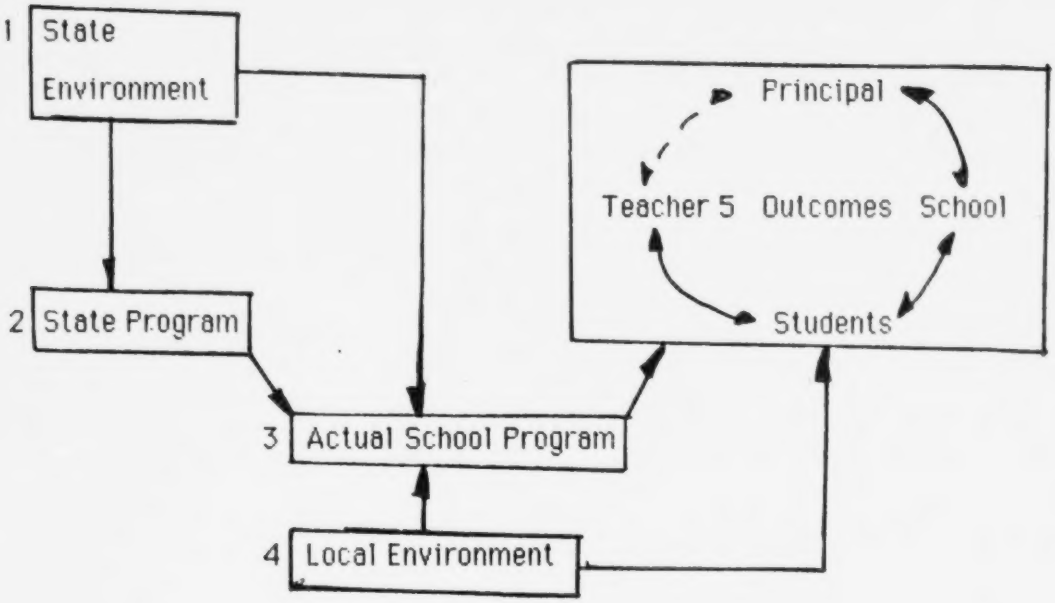
5. Outcomes: the results of the state school improvement program for teachers (e.g., increased job satisfaction or improved instruction), principals (e.g., improved instructional leadership), the school as an organization (e.g., improved collegial relationships) and students (e.g., increased achievement and improved attitudes).

The conceptual framework shown in Figure 1 is built on the notion that the state environment (box 1) shapes the state program (box 2). However, the actual program at the local level (box 3) is modified by the local environment (box 4) and possibly by the state environment (box 1). The actual program (box 3) influences the outcomes within the school (box 5). The intended outcomes of state programs vary; the study investigated the types of outcomes each state defined as primary.

The state programs studied were selected to reflect a range of school improvement strategies, not to represent all current activity in the nation nor necessarily all of the best programs. The states for the programs studied also provided diversity in region of the country, population size, per capita personal income and degree of centralized vs. local control.

Figure 1

Conceptual Framework




In each state, the program as it actually existed in four to seven local schools was studied; at least two schools were judged by state department staff or other knowledgeable people to be actively and successfully implementing the state program. Activity and success in other schools were judged to be at least moderate. At least one secondary school was selected in each state, and across all ten states, schools were selected from districts in urban, suburban and non-metropolitan areas.

Two general types of state programs were researched: (1) instructional improvement programs with an emphasis on improving the skills of educational professionals (teachers and administrators) and (2) general school-wide improvement programs with an emphasis on improving schools as educational institutions. Several states have developed education improvement programs that are school based and engage people in a planning, problem solving and program

implementation process.[4] California's 15 year-old School Improvement Program provides schools about $100/pupil to design and implement a school-based improvement program, and is governed by a school site council of parents, teachers and administrators. Colorado, through state mandated local accountability, requires schools periodically to engage in a planning process to identify needs and propose strategies to address them. Colorado also has a "Cluster Program," which includes voluntary associations of schools (usually geographically proximate) that work together on improvement issues such as school climate or individually guided education. Connecticut's School Effectiveness Process is a voluntary planning process intended to implement, with state-provided technical assistance, the seven characteristics of effective schools. Ohio's Effective Schools Program seeks both to develop effective schools characteristics and to increase student achievement, through collegial decision-making within a systematic planning process. Pennsylvania's Long-Range Planning for School Improvement is a variation of a 17 year-old, mandated, five-step school planning process that now involves schools working on two or three of Pennsylvania's twelve quality education goals. These strategies view schoolwide change as the launchpad into education inmprovement. The assumption is that more effective schools will improve teaching and thus increase student achievement.

Several other states have developed instructional-focused, education improvement programs designed to improve the skills of teachers and administrators. Some, such as Maryland's School Improvement Through Instructional Process Program, target experienced teachers and seek to expand and strengthen their pedagogical skills. Others, such as Georgia's Teacher Appraisal Program, focus on beginning teachers and include on-the-job assessment of and

[4]The descriptions of the state programs pertain to the 1984-85 school year; the programs may have changed during the past two years.

skill development for new teachers. Still others, such as Missouri's Instructional Management System, draw on mastery learning and provide skills in how to organize instruction and manage learning. Finally, a few, such as Arkansas' Program for Effective Teaching, represent comprehensive attempts to improve both teacher instructional skills and administrator instructional supervision skills in an articulated training program that spans several months and years. All of these state strategies vie Improved teaching and strengthened instructional supervision skills as the la ad into education improvement. The assumption is that better teaching will ove student performance and help to create more effective schools.

Most previous studies of school improvement have analyzed the implementation of products, programs or curriculum packages developed with federal funding. This study is the first to analyze state programs and one of the first to analyze instructional training **and** school-wide improvement strategies. This study is unique in analyzing a new level of the education system, the state, and in analyzing two different improvement strategies. The findings are especially important because they provide guidance for the types of new state roles and local change structures that are needed, at least in part, to make progress in implementing most objectives of current state education reforms.

## 2. The Context for Fostering Improvement

Before describing and illustrating the components of effective improvement strategies as they operated at the school level, a few comments are needed on the factors in the state and local environment that seemed to surround successful programs.

State context.

Four conditions at the state level but outside the state education agency (SEA) appeared critical for successful implementation.

1. State pressure to change, reform or improve education was important. This pressure derived from new state testing programs, strengthened accountability requirements, and, more recently, education reform objectives. The existence of this pressure was more important than the particular type of pressure. Local educators identified state pressure as a force that helped catalyze a perception of local need to change.

2. State respect for the traditional balance of state/local responsibility and control was a second factor. Traditional patterns of state/local control did not determine whether programs were voluntary or mandatory, however. Programs were voluntary in centrist California and mandatory in local-control Colorado, for example. Mandatory programs, however, were linked to traditional state regulatory functions, such as school accreditation in the Colorado and Pennsylvania programs.

3. Support from general political leaders -- governors and legislatures -- was a third, key state variable. While state departments initiated most programs, usually without formal legislative sanction, those that earned governor and legislature support grew in size and strength. California's multi-million dollar funding of the School Improvement Program would be impossible without legislative sanction, for example. Lack of political support has weakened the Colorado Clusters Program and the Pennsyvania Long Range Planning Program.

4. Discretionary money available to local districts and/or schools also made a difference. Although amounts were large only in California, where schools received about $100/pupil, discretionary funds were important. Most local efforts required extra resources such as time from teachers, training for staff, purchase of materials and the use of consultants, all of which cost money. Availablity of

discretionary dollars gave school teams a sense of empowerment that was important to building commitment. When a state did not provide extra funds, only districts with excess local funds -- usually wealthy districts -- could pay for school improvement.

Four aspects of the organization,staffing and perspective of state departments of education also were associated with local program success.

1. Political support within the department was as important as outside political support. The strongest programs had an active SEA advocate, either the chief state school officer or someone backed by the chief. When the chief was not a supporter, outside general political support also was weak, and the programs became vulnerable to other demands for scarce resources.

2. In the strongest programs, SEA's viewed education improvement activities as collegial ventures with local educators rather than as bureaucratic necessities, and made SEA staff available to assist schools and districts. This emphasis on working together sometimes represented a new style for SEA/local district interaction.

A collegial relationship was particularly important for small districts, which were more likely to turn to the SEA for support. Large districts tended to have staff expertise at least equal to SEA expertise. In fact, influence often flowed the other way for large districts, i.e., their approaches to school improvement served as sources of information for the SEA program.

3. Resources -- money and knowledgeable people -- also made a difference. State programs were strengthened when SEA funds were ample, staff had substantive and process skills, and at least some resources were available to schools.

4. SEA structure and organization were important. When programs were adequately staffed, placed in a separate unit, linked to or integrated with other SEA improvement efforts, and supported over time, local impact was enhanced.

5. An effort to develop local capacity and belief in the importance of technical assistance were central to all the programs studied. The Ohio Academy for School Improvement Strategies (OASIS) was designed to strengthen principals' leadership skills. The California, Ohio and Connecticut programs trained cross-role teams at the school level to identify and solve their own problems -- a key aspect of building local capacity. Arkansas' PET program hinged on developing local people as program trainers.

Local Environment.

Four general factors in the local context -- turmoil, innovation overload, large school size and school complexity -- negatively affected successful implementation. Turmoil included strained relationships such as parent and community opposition, fragementation caused by court-ordered busing, school closings caused by declining enrollments or staff cuts caused by diminished budgets. In general, these types of conditions were absent from the schools visited.

Innovation overload -- too many changes being made simultaneously -- was avoided. In the most successful schools, the state program was the major education improvement activity, or a substantial part of a larger activity. In a number of schools, teachers welcomed a focus on a single improvement program as a sign that districts and principals had clear priorities; commitment to a single program for more than one year reinforced the message.

Large schools had more difficulty implementing education improvement programs, regardless of type, than small schools. Secondary schools generally had more difficulty than elementary schools. Attending to the details of an

improvement effort was easier when fewer people were involved. The increased complexity of secondary schools did not preclude education improvement, but it did make improvement more complex. In successful secondary programs, department units were recognized and integrally involved in the process.

District size further complicated the issue of school size. Even when a program had a high priorty in a large central office, all program directors were not equally supportive. High school department heads, who are in contact with many central office curriculum coordinators, could get mixed messages. Since elementary schools have fewer administrators and thus fewer people in formal contact with the central office, the potential for mixed messages is lessened.

Two local variables positively associated with program implementation were stability of staff and leaders, and good labor/management relations. Put differently, staff leadership turnover made program implementation more difficult. School and district orchestration suffered. School-wide programs, which required careful coordination of thier many and interrelated activities, became even more complex. Since collegiality and cross-role teams were important, strained labor/management relations impeded implementation.

When the supportive enviornment described above existed, school improvement efforts appeared to have the greatest chance for success. Fortunately, nearly all of these conditions are within the power of state and local education leaders to control.

3. The Elements of Successful State Education Improvement Programs

Both successful school-based and instructional-focused state education improvement programs proceed in four stages: initiation, initial implementation, complete implementation, and institutionalization. Diagrams 1 and 2 represent a

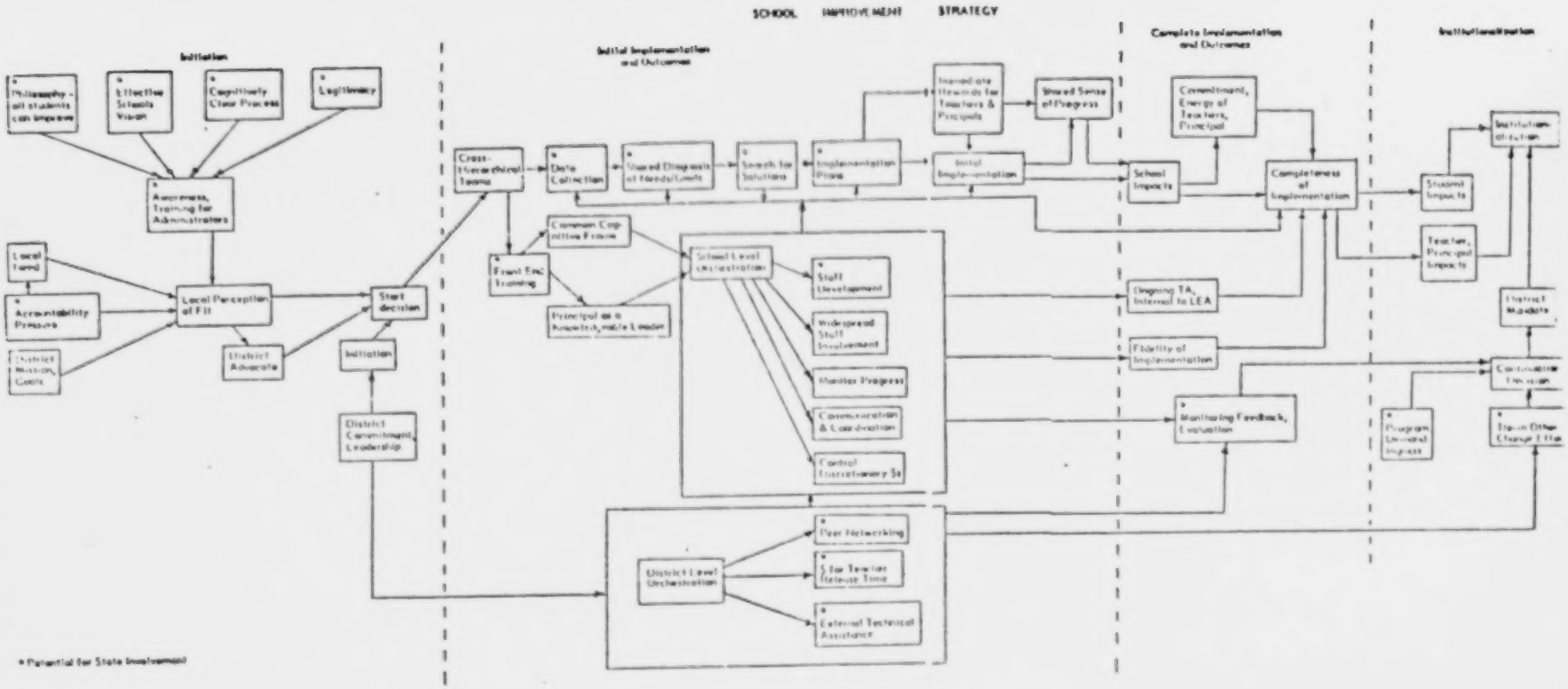



Diagram 1 --Causal Network in All Four Stages





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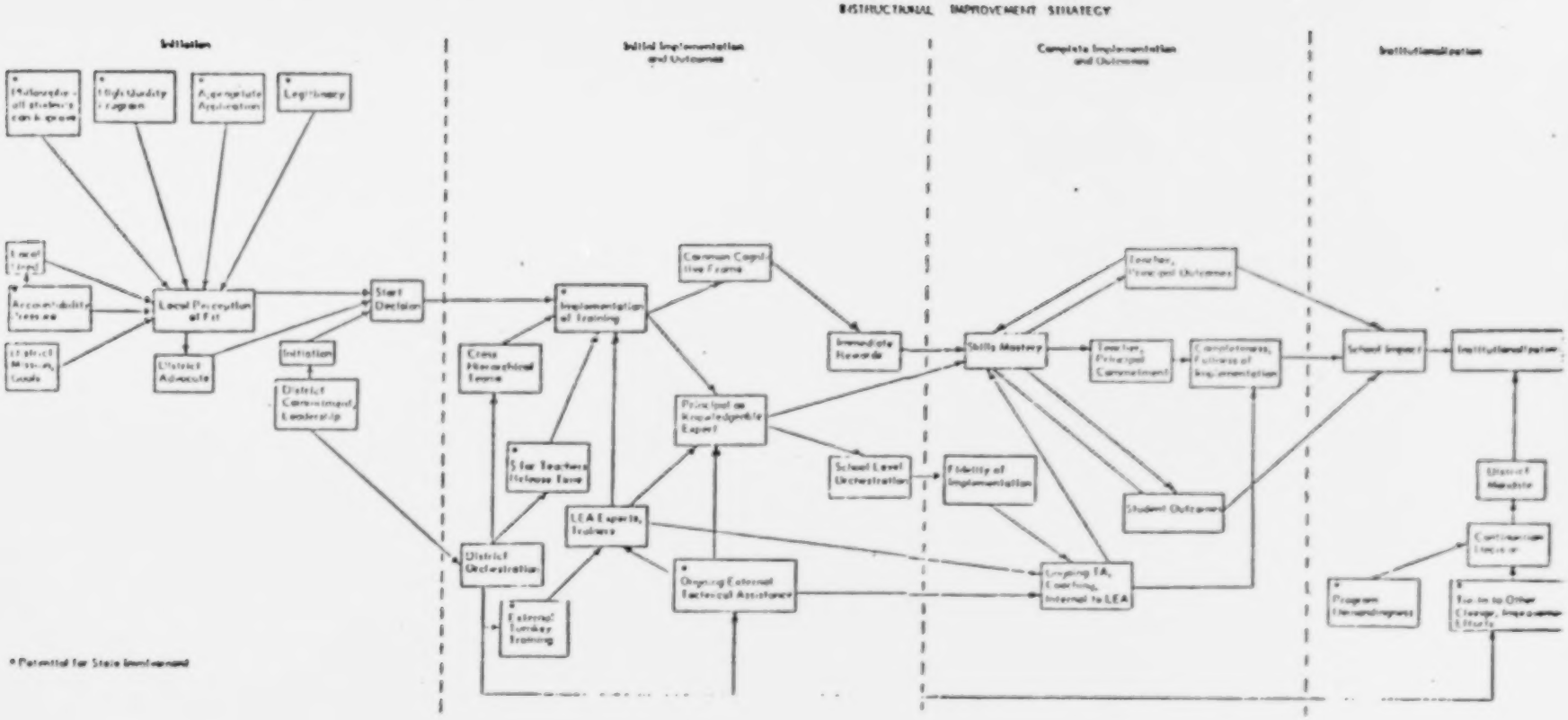


Diagram X--Causal Network in All Four Stages





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synthesis across 40 schools in 10 states that shows variables that seem to be associated with successful movement through the stages to put the state program in place. The two types of programs have similar patterns of successful implementation; the few, but significant differences are noted in the following discussion.

Initiation

A dozen or so variables, grouped here into four key factors, seemed most important in the initiation stage, that time during which forces are converging to establish the base for undertaking an improvement effort..

1. External Pressure for accountability, either state or local, that heightened local schools' sense of need to change. A new state testing program in basic skills, a district decision to improve student performance, or a state education reform to raise standards can provide accountability pressure. (It is important to remember, however, that the schools studied were engaged in a positive change process; the effect of external pressures on schools not ready to change may be different.)

2. Effective awareness training, especially important for school based programs, make known to administrators a well conceptualized and researched process promoting education improvement for all students. Most awareness training programs had imbedded in them notions that:

- all students can improve
- academic achievement is a key goal of effective schools
- principal-led collaborative decision-making enhances working relationships among school personnel
- a clearly defined process of data collection, shared diagnosis of results, identification of alternative solutions to needs/problems, plan implementation and evaluation of results needs to be used

- schools need external support to engage in change.

While awareness-building was an activity for all school based programs, awareness-building sessions were part of some (Maryland's and Missouri's) but not all instructional focused programs. Finally, while some state programs trained administrators about characteristics derived specifically from effective schools research, all were based on some clear vision of an effective school. In nearly all programs, improved student academic achievement, moreover, was a key goal.

3. Perception of fit of a state improvement program, or a district decision to participate in that program, with a local school sense of need to improve. Perception of fit evolved from an alignment of several factors.

One was a match between state program and induced local need. Often, the program itself had a good national or regional reputation, like the programs used in Arkansas, Connecticut, Maryland and Ohio. Second was a good match of the state program to content area and level of school. When this match was poor or inappropriate, implementation (appropriately) languished. Third was an aura of legitimacy surrounding: (a) the program; (b) the program sponsor outside the district; (c) the program sponsor within the district; and (d) those involved in providing training. Often programs with national reputations such as Madeline Hunter's Clinical Teaching, Tom Good's Active Teaching and Ron Edmond's Effective Schools provided legitimacy. Other times the program developer provided training such as Tom Good did in Maryland. Legitimacy developed in different ways, but it usually proved to be an important variable. Fourth was an underlying philosophy that all students can improve their academic performance and that all teachers can improve their teaching effectiveness. Fifth was an overlap of state pressures for change with district pressures. When central offices and local boards were integrally involved in an improvement effort, including making the decision to

participate in the state program, chances for successful implementation improved.

4. A district advocate for the program who was knowledgeable about the progam, believed it fit district and schools needs, and helped obtain board and superintendent decisions to participate. Central office involvement was key to implementation success. Often the initial central office program advocate became the district coordinator of the program or gave formal, bureaucratic backing to whomever else became coordinator.

In short, leadership from the top -- from the state or the district -- proved important for successful implementation over the long term. Indeed, central office initiative was appropriate for adoption, i.e., for the decision to participate in the state program. So was use of a high-quality program that met a local need, even though need was sometimes induced by pressures external to the school. Top-down leadership worked at the initiation stage.

Initial Implementation

Several variables important to the second stage, grouped here into six key factors, are important for initial implementation, the stage during which teams of teachers and administers begin the improvement program within the school.

1. Development of district strategies for implementation. A series of management and administrative tasks had to be carried out and coordinated at the district level. Upfront training was needed, substitute teachers sometimes had to be hired, central office staff needed to coach school personnel, data on impact needed to be returned to schools, paperwork needed to be processed, board support needed to be sustained, and often additional resources were required. Without district orchestration, local efforts were isolated.

2. Creation of a cross- role team, i.e., a team of central office staff, school administrators and teachers. These teams played various roles, but they were

present in nearly all high-success schools. The creation of these teams often was a first step in district implementation. While top-down worked for initiation, it did not work for implementation. The team typically was led by the principal and included selected teachers. Teachers were not necessarily the most effective teachers; rather, teachers often were selected to represent a range of perspectives (new teachers as well as experienced teachers) or for scheduling convenience. Cross-role teams usually determined how programs would be implemented in particular schools and thus gave team members shared involvement in the specifics of program implementation. Cross-role teams often were the visible sign that teachers and administrators would work together collegially on the details of installing the program in individual schools.

Several spin-offs of cross-role teams also proved important. First, the testimony of team members who experienced initial and successful training helped spur additional interest. Second, principals emerged as experts knowledgeable about program substance as well as about program administration. This helped produce effective school strategies for implementation and a school expert (the principal) who could provide ongoing technical assistance to teachers during the crucial stage of complete implementation. Third, members of cross-role teams often gained a common stake in the success of the program and a "common cognitive frame" about the program, such as a shared language about instruction, common knowledge of the key elements of the planning process, a positive ethos, and managerial/technical alignment, i.e., the aligning of management and administrative actions with the technical needs of the program.

3. An effective training program that produced early results, like Active Teaching, Clinical Teaching or Effective Schools Diagnosis. It was important that trainers were experts in the substance of the program, that they had good adult training skills and that they modeled strategies when teaching them. It also was

important to give teachers opportunities to paractice what they had learned, with appropriate feedback, during the training cycle. Good training provided school leaders with the knowledge and skills to engage the school in a planning, needs identification and improvement plan development process. Good training provided senior teachers with a language to describe effective practices, which in turn helped them analyze their own instructional approaches and communicate more effectively about teaching with others. It gave inexperienced teachers a language, too, as well as a clear process for developing lesson plans, and enriched capacity to seek advice across the full range of discrete areas of instruction. Good training also focused on the issues of paramount concern to teachers -- effective schools and good instruction. Whatever the specific reasons for immediate results, the emergence of results helped move school programs into the complete implementation stage.

The nature of the immediate rewards differed for the two types of programs. For school based programs, immediate rewards often simply were identification of needs, involvement in the identification process, the sense of empowerment that evolves from involvement or the satisfaction of planning to meet needs. For the instructional focused programs, rewards derived in large part from the feeling that there really was a way to discuss teaching or from actually learning some new teaching methods.

4. Provision of a variety of resources, including not only money but also technical assistance from staff both external and internal to the school. Where resources were not provided by the state, they were provided by districts, although wealthier districts were more able to provide extra resources than poor districts. When extra resources were not provided, the improvement effort usually suffered.

5. School orchestration. Where activities, strategies and tactics were carefully coordinated at the school as well as the district level, progam implementation and impact was more successful.

For school based programs, school orchestration often included specific responsibilities for the cross-role team such as:

- determining staff development needs for each step of the process. Some training was needed just for team members, other training was needed for all school staff. The latter evolved from analysis of school and student data, and was focused on specific areas for helping staff improve the school.
- staging staff involvement. Because widespread involvement was not attempted until administrators and teams became committed to the school improvement process, staging involvement showed faculty that administrators were committed to the effort. Staging involvement also allowed administrators and the cross-role team to gain a deep understanding of the core concepts of the planning process before schoolwide implementation.
- monitoring progress. The team insured that the process was moving ahead as planned and identified problems as they occurred.
- communicating and coordinating. As more and more staff became involved and the process moved through various stages, it was critical to maintain widespread communication and well coordinated activities.
- controlling discretionary dollars. Having control over discretionary funds was very important. Teams could determine if funds should be spent for released time for teachers, instructional materials, staff training or other needs. Having responsibility for deciding how to use discretionary funds increased the teams' belief that they were trusted to make sound decisions.

Further, school based programs often began with training in skills to engage in the problem identification and program development process, and then how to

manage the implementation of the program. Processes were much more diverse and complex in the school based programs. Indeed, just one key activity -- an instructional training program -- would be the entire program in the instructional focused programs.

6. Turnkey training. Training district people to be trainers for the program created local experts who freed districts from complete reliance on external experts (usually state program staff) and allowed districts to spread programs to other schools more easily. Local experts also provided technical assistance and on-site coaching during the complete implementation stage. Finally, many local experts were principals, who thereby became substantively and visibly involved in program implementation. When states maintained and expanded turnkey programs by providing ongoing skill development and expansion for trainers, local expertise was broadened and the ability to provide ongoing coaching in schools was strengthened.

In short, successful initial implementation involved: participating in a research-based, proven effective program accompanied by quality training; creating cross-role teams that planned the specifics of program implementation and gave teachers a stake in the program; creating school leaders -- usually principals -- as knowledgeable experts and active in implementation (which gave principals a stake in the program); and developing school management and coordination of the many implementation activities at the site level. Combined, these variables produced immediate rewards for teachers and principals, which helped produce engagement and the release of energy necessary to enter the next stage of implementation.

Complete Implementation

Several important variables are important for the third stage, complete implementation, during which all components of the state program are fully installed in a local school.

Technical mastery of skills. Education improvement programs needed "hard outcomes" to evolve before full implementation. These hard outcomes were new teaching skills for teachers, new instructional supervision skills for principals or schoolwide planning and program implementation skills for both. Teachers and principals needed to identify and discuss the new skills, to know when and how to use them and to have mastered their use in classroom, supervision or school improvement settings. Skill mastery evolved from: (a) coaching, as teachers and principals worked through the difficulties of using new techniques; (b) program fidelity, i.e., pressure to implement all elements of the program and not make adaptations by eliminating key components, and a push for full implementation by districts and schools; (c) leadership by knowledgeable principals and their personal involvement in implementation activities; and (d) initial engagement deriving from the immediate rewards produced during initial implementation.

Skills mastery for school based programs produced concrete plans for implementation, improved communication patterns among teachers and administrators, and a shared sense that important problems of the school were being addressed. Skills mastery for instructional based programs produced two other important variables in this stage; teacher/principal outcomes and student outcomes, both of which in turn led to further work on mastery of skills.

In short, when teachers realized that a state program improved their instructional effectiveness (teacher outcomes) and when principals realized that it improved their instructional leadership (principal outcomes) and when both saw that it improved the school generally (school outcomes) as well as pupil achievement (student outcomes), there was renewed energy to learn and hone

skills. From this confluence of outcomes flowed another variable -- teacher and principal commitment. Commitment, then, led to full implementation.

Commitment emerged at the end of the implementation process, not at the beginning. Put differently, commitment was not built "up front" before the program began, but instead evolved as the program was implemented. Commitment developed incrementally, from initial rewards of some type, to an element of success in the middle of the project (such as a shared sense of progress in the school based programs or skills development in instructional programs), to full commitment.

The importance of ongoing technical assistance and on-the-site coaching for complete implementation is difficult to understate. Ongoing assistance, after up-front training, is the sine qua non of effective education improvement programs. Assistance both for engaging in the school improvement-planning process and for learning new instructional or supervision skills was important. Individuals -- teachers and principals -- can not learn new skills and use them effectively unless they have help over several months, practicing to the point of mastery. Ongoing assistance and pressure to change, moreover, go together. Ongoing assistance provides the support -- the carrot -- needed to nudge teachers and principals to change; press for program fidelity provides the pressure -- the stick-- to develop the full component of new skills. Teacher and principal skills mastery, then, produce improved student learning, which is followed by teacher and principal commitment to the program. Commitment emerges when teachers and principals master new skills, and student learning improves. The sequence of complete implementation of instructional based education improvement, then, is ongoing assistance (observation, feedback and coaching), teacher and principal skills mastery, student outcomes, and teacher and principal

commitment. The sequence for school based programs is ongoing technical assistance, school outcomes, and teacher and principal commitment.

Two other factors were important for full implementation of school based programs. First, peer networking supported complete implementation, perhaps because teachers needed psychological as well as technical support as the attempted change. Formal peer-netowrking (organizing times for teachers and administrators in one program to interact with teachers and administrators in comparable programs) seemed to serve this dual purpose. Second, an evaluation variable also was important. For example, schools in the California program are formally reviewed every three years. At issue is how correctly a school has followed the school and district process and whether improvement activities have had positive impacts on students. Most people interviewed considered this review a critical element of the program. Evaluation was, in a way, build into instructional focused programs: if teachers did not master new skills or if the new skills did not improve student performance, programs withered.

Institutionalization

Institutionalization is the stage during which the improvement program becomes part of the standard operating activities and procedures of the school. While the key implementation factors for the two types of programs are similar, an important difference occurs at the juncture of the complete implementation and institutionalization stages. For school based programs, school effects are the normative outcomes for complete implememtation and evolve first. For institutionalization to occur, however, the program also must produce outcomes for teachers, principals and students.

For instructional based programs, the normative outcomes for complete implementation are for individuals -- teachers, principals and students. Institutionalization of these programs, however, did not occur until there were

impacts on the school as an organization. School impacts are either organizational (e.g., a focus on instruction, changes in teacher supervision practices or new curriculum policies) or cultural (e.g., the development of a positive climate, raised expectations, more collegiality, interest in continuous improvement).

When instructional strategies, which aim to improve the skills of individuals, were successful, they had significant effects on schools as organizations. When school strategies, which aim to improve schools as organization, were successful, they had significant impacts on the competencies of the individuals within them. For both, institutionalization evolved only when school as well as individual impacts resulted. This shows that whatever door -- instructional (individual) improvement or school improvement -- is used for entrance into education improvement, both individual and school effects must evolve before institutionalization emerges. Put differently, successful education improvement changes not only the individuals in schools but also the schools themselves as places of work and learning.

Two other factors were important for institutionalization:

1. A district decision to continue a program, often a district mandate for all teachers, administrators and schools to participate it it. Although school programs could continue without district action, district commitment helped sustain local programs. District support also played an important role in tying the state school improvement program to other district efforts to change schools, thus signalling the importance of the school improvement program.

2. Extent of change required. If a state program required large organizational changes in schools (e.g., major reorganization of the curriculum, or other changes requiring significant resources or making significant demands), its chances for institutionalization were reduced.

## 4. Summary

Surprising as it may seem to some, state initiated education programs focused on improving schools as institutions or the skills of individuals in schools are successfully evolving in states and local schools across the country. Fundamentals of success appear to be the use of a high quality, research-based, proven effective program; good up-front training; ongoing assistance in the form of observation, feedback and coaching to help teachers and administrators master the skills in the program; and sustained support in the form of resources and encouragment from district and state education leaders. When fully implemented, the programs affect not only the individuals they are designed to affect but also the schools in which they operate. Teachers' and administrators' skills expand in successful programs, students learn more and schools become better places in which to work and learn.

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ABSTRACT

A study of the relative impact of three different methods for assessing school needs failed to find significant differences in those methods' effects on school improvement efforts. Questionnaires were sent to 148 schools in six states: Arkansas, Colorado, Connecticut, Iowa, Michigan, and Pennsylvania; 41 schools participated in the study. Two instruments were used to gather data: school principals completed a School Background Information Form to provide contextual data and information on the school assessment methods used, and principals and two selected faculty members completed an Implementation Questionnaire designed to elicit data on respondent background, features of the local school assessment study, overall impact of the assessment, and impact on the specific areas of teacher activities, instructional materials, instructional situations, goals, problems, and policies. The assessment methods examined were as follows: (1) accreditation, using performance information gathered within National Study of School Evaluation and regional accreditation guidelines; (2) systems management, involving analysis of discrepancies between stated goals and actual performance; and (3) the effective schools method, based on comparison of school characteristics with characteristics identified in effective schools. Charts and tables presenting different aspects of the findings are attached. (PGD)

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**SUMMARY**

**Paper Presentation at the American Education Research Association Conference, San Francisco, CA, April 17, 1986.**

**Title: School Assessment and Improvement: How Close is the Relationship?**

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**Funding: Institutional Research Grant, Graduate College, University of Vermont**

## 1.0 Introduction

Currently there is a considerable amount of pressure on and effort by local school districts to examine their performance and to embark on a process of improvement or change. Numerous states have or are in the process of passing regulations requiring or encouraging local school districts to examine their performance vis-a-vis a set of factors. This concern for school performance is not a new phenomenon and appears to capture the attention of the public on a cyclical basis. Most recently the commission reports particulary the President's Commission on Excellence in Education and its report, A Nation at Risk, have stimulated a concern about the quality of public education and a need for improvement.

Past efforts at improving schools, particularly secondary schools, principally involved the use of the National Study of School Evaluation criteria and regional accreditation units. During the late sixties and early seventies, numerous school districts pursued a decision management process that often involved a needs assessment study and subsequent implementation planning. More recently and in part as a result of the effective schools research; schools, with the encouragement or the mandate of state departments of education, have pursued a comprehensive assessment of their performance using factors thought to be associated with effective schools. Each of these approaches are being utilized to varying degrees by schools through out the United States. What is not known, is the degree to which any of these methods seem to impact various aspects of a school's operation including structure, curriculum, teaching methods, goals, policies, and problems. Or, if a particular assessment approach results in greater impact than another approach.

In order to explore the relative impact of various school assessment approaches outlined above, the research of Rosenblum and Louis (1981) provided both a conceptual and methodological model. In their research, they studied the impact of the National Institute of Education's experimental schools project which was targeted at improving rural schools. They employed a systems model

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which accounted for several dimensions of potential impact and used multiple data gathering methods for documenting system wide changes and how these changes were influenced. One of the principal data gathering methods for their study was a questionnaire which was administered to key school personnel including administrators and classroom teachers. The Implementation Questionnaire was adapted for this study.

The objectives for this study were:

1. To determine to what degree are schools and specific components impacted by their school assessment study.

2. To determine if any differences in impact could be attributed to the particular school assessment methodology employed (e.g., accreditation, decision management, or effective schools approaches).

## 2.0 Study Design

In order to develop a potential population of schools to study in regard to the nature of their school assessment approach and the degree to which members of the staff perceived an impact of this effort, schools were nominated by a cross section of school experts. These persons were identified for their visible efforts in aiding schools in designing and implementing a school improvement process which was patterned after one of the approaches mentioned in objective 2. This procedure resulted in identifying 148 schools in the States of Arkansas, Connecticut, Colorado, Pennsylvania, Iowa, and Michigan. Each school receive three copies of the Implementation Questionnaire (one to be completed by the principal and two to be completed by active and informed faculty members selected by the principal). Forty one (41) or twenty-eight percent (28%) of the schools responded to the questionnaire. An additional thirteen schools indicated their inability to respond to the questionnaire, thus the overall response rate was nearer to thirty percent (30%).

## 3.0 Data Gathering Methodology

Two instruments were used to gather the desired information for this study. The Implementation Questionnaire, which was adapted from the Rosenblum and Louis study, contained eighty eight (88) variables clustered around the categories of respondent background, features of the local school assessment study, overall impact, and impact categories of teacher activities, instructional materials, instructional situations, goals, problem and policy areas. A second instrument called the School Background Information Form was completed by the school principal and provided information on school and community characteristics and the nature of the school assessment approach used by the school.

## 4.0 Study Findings

### 4.1 Background on Schools and Needs Assessment Study

In Attachment A is a summary of data which provide information concerning the nature of the schools which responded to the survey instruments. In addition, a profile is provided concerning the needs assessment approach followed by the school system and how this assessment process was viewed vis-a-vis fourteen factors.

A perusal of these data suggest several things. First, the population of schools were very diverse in terms of size (i.e., number of pupils, staff and administrators, and attendance area), financial support, and community type (i.e., urban, rural, and suburban). Second, in regard to conducting the needs assessment, a high percentage of schools (75%) relied on external assistance particularly in the design of the study and data aggregation and analysis. To a lesser degree (approximately 50%), the external assistance was involved in data gathering, preparation of a report, follow-up planning, or on-going consultation. Third, in regard to the fourteen descriptive factors, most studies (80% or more) were seen as nonpolitical, useful and professional. The least seen (50% or less) included the factors of adequate, efficient, accurate, and systematic. More on this in the discussion section.

### 4.2 Degree of Impact

As can be observed in Chart A, the data suggest that there is a discrepancy between what staff members perceive the overall impact of their needs assessment process to be and what areas are most affected. In Chart A is displayed both a potential rating and perceived rating for overall impact, and other areas of content, organization, etc. As is portrayed, respondents rated the overall performance of their needs assessment study very close to its potential level. However, an examination of other areas of impact, a greater gap is observed between potential performance and actual performance. Lags are very evident in the areas of content, instructional materials, instructional situations, problems, and policy. Some moderate success is reported for the areas of organization and goals. The data suggest that there were some school level changes but few classroom level changes. The data concerning goal performance suggests a "moderate positive effect."

### 4.3 Variance in Perception

The data gathering process involved administrator and teacher input in regard to the areas explored for potential impact. In Chart B is displayed the results of the administrators and teachers concerning their perception of impact for each of the areas under study. As illustrated in Chart B, there is across the board agreement on the degree to which the various areas were impacted. The only exception to this pattern was the area of instructional materials with the principals perceiving a higher degree of impact than the teachers.

### 4.4 Comparison of Impact with Top Performers

The statistical procedure used in this study enabled identifying six top performers. That is, when cumulating scores for each of the impact areas per school, six schools derived an overall cumulative score that was greater than one standard deviation from the mean performance for all schools in the sample. In Chart C is displayed the total group performance scores and the impact score for the top performing schools. The discrepancies between the two sub-populations favors the top performing schools in nearly all areas. The degree of discrepancy is soften by virtue of the fact that the mean scores for the other schools is somewhat inflated by the inclusion of the top performing schools' scores.

### 4.5 Comparison of Needs Assessment Approaches

For the purposes of this study, the following definitions were used: accreditation involves gathering performance information within the National Study of School Evaluation (NSSE) and regional accreditation guidelines, systems management involves a discrepancy analysis based on items related to a predetermined list of goal statements (desired performance) and perceived (actual) performance, and effective schools involves the utilization of the effective schools characteristics for data gathering and analysis for determining areas in need of improvement.

Overall, there are only slight differences in performance regardless of the needs assessment approach used. As is shown in Chart D, there are some differences in the areas of organization and policy. In the area of organization, systems management and effective schools approaches had greater impact than the accreditation approach. In regards to policy, systems management reflects more impact than the other two approaches. There are some hints of differences between the approaches in the perception of overall impact, content, teaching activities, and instructional materials.

## 5.0 Discussion and Implications

The overall purpose of this study was to determined what, if any, relationship exists between school assessment and school improvement. Most school improvement efforts begin somewhere and often it is with a school assessment study. That is to say, data and information are collected via questionnaires, interviews, document reviews, and sundry surveys. These results are aggregated, analyzed, and discussed with an eye toward identifying areas worthy of change. This study attempted to determine the degree of relationship between needs assessment outcomes and subsequent school impact.

First, it was interesting to note that from the background data a certain paradox exists. That is, most needs assessments were perceived as professional, useful, and nonpolitical but were

lacking in accuracy and adequacy. Clearly, it is not a perfect world and schools went with what they got out of the needs assessment but they also perceived that something was missing. Given the time constraints under which school personnel and outside consultants typically operate, this is not a surprising finding.

Second, in regard to the overall question of whether there is a correlation between assessment and improvement, one would conclude not. When personnel were asked generally whether much was accomplished, the response was favorable. However, when asked about specific areas in which it is reasonable to expect impact, there was little evidence of such impact. There are several potential explanations for this. If a school is already performing at a top level in each of the areas probed then the level of impact is not going to be very significant. A ceiling effect, if you will. Without additional information, this is hard to judge. There is always the possibility that the changes occurred in other areas but do to the comprehensiveness of the areas queried, this is less likely. A third possibility is something of a public polling phenomenon. That is, when people are queried in general about current issues, they give one response. However, when pressed for specific facts, there is slippage of knowledge and understanding.

In regard to what areas are affected the most by needs studies; instructional materials, instructional situations, educational goals, and problems head the list. The least affected areas include curricular content, teaching activity, and policy. Again, some of the minimal impact can be explained by the "ceiling effect" previously discussed.

And finally, as to whether the needs study approach that was pursued by a school system made a difference on the impact of certain areas or overall, one would have to conclude no. The differences found were so slight that more study is needed before any conclusions can be drawn.

## 5.0 Subsequent Research

The study reported here is part one of a two part study. Part one has enabled the identification of schools which were able to affect some changes stemming from their initial needs assessment effort. Part two is designed to determine what made it possible to achieve these results. Currently, three of the top schools are being visited for a one week period for the purposes of documenting impact, methodology followed, and the identification of factors which contributed to the implementation of the changes. These site visits will be completed this spring and their findings reported in the near future.

ATTACHMENT A

SCHOOL BACKGROUND AND NEEDS ASSESSMENT INFORMATION

1.0 School Background Characteristics

| | Characteristic | Mean | Median | Std Dev | Min | Max |
|---|---|---|---|---|---|---|
| 1.1 | School Size | 648 | 474 | 514 | 240 | 2909 |
| 1.2 | Per Pupil Cost | 1825 | 2000 | 1133 | 15 | 4630 |
| 1.3 | Full Time Teachers | 37 | 28 | 33 | 12 | 160 |
| 1.4 | Administrators | 1.8 | 1 | 1.3 | 1 | 7 |
| 1.5 | School Based Spclist | 7.3 | 7 | 5.6 | 1 | 25 |
| 1.6 | Attndnce Area (Sq.Mi) | 74 | 33 | 98 | 1 | 400 |

2.0 Community Type

| | Type | Number | Percent |
|---|---|---|---|
| 2.1 | Urban | 20 | 48.8 |
| 2.2 | Rural | 12 | 29.3 |
| 2.3 | Suburban | 9 | 22.0 |

3.0 Needs Assessment Information

| | Month Initiated | Number | Year Initiated | Number |
|---|---|---|---|---|
| 3.1 | September | 9 | 1982 | 9 |
| 3.2 | May | 5 | 1983 | 8 |
| 3.3 | March | 4 | 1981 | 6 |

| 4.0 | Nature of External Assistance: | Yes | No |
|---|---|---|---|
| 4.1 | External Assistance | 75% (31) | 22% (9) |
| 4.2 | Aided in Design | 66% (27) | 34% (14) |
| 4.3 | Data Gathered | 44% (18) | 56% (23) |
| 4.4 | Aggregated Data | 61% (25) | 39% (16) |
| 4.5 | Prepared Final Report | 54% (22) | 46% (19) |
| 4.6 | Aided in Planning | 54% (22) | 46% (19) |

| | | | |
|---|---|---|---|
| | 4.7 Ongoing Consultation | 51% (21) | 49% (20) |
| 5.0 | Needs Assessment Descriptors | Yes | No |
| | 5.1 Timely | 61% (25) | 39% (16) |
| | 5.2 Accurate | 54% (22) | 46% (19) |
| | 5.3 Needed | 78% (32) | 22% (9) |
| | 5.4 Efficient | 51% (21) | 49% (20) |
| | 5.5 Adequate | 46% (19) | 54% (22) |
| | 5.6 Effective | 56% (23) | 44% (18) |
| | 5.7 Appropriate | 66% (27) | 34% (14) |
| | 5.8 Systematic | 54% (22) | 46% (19) |
| | 5.9 Political | 7% (3) | 92% (38) |
| | 5.10 Professional | 81% (33) | 20% (8) |
| | 5.11 Relevant | 71% (29) | 29% (12) |
| | 5.12 Objective | 66% (27) | 34% (14) |
| | 5.13 Useful | 85% (35) | 15% (6) |
| | 5.14 Utilized | 66% (27) | 34% (14) |

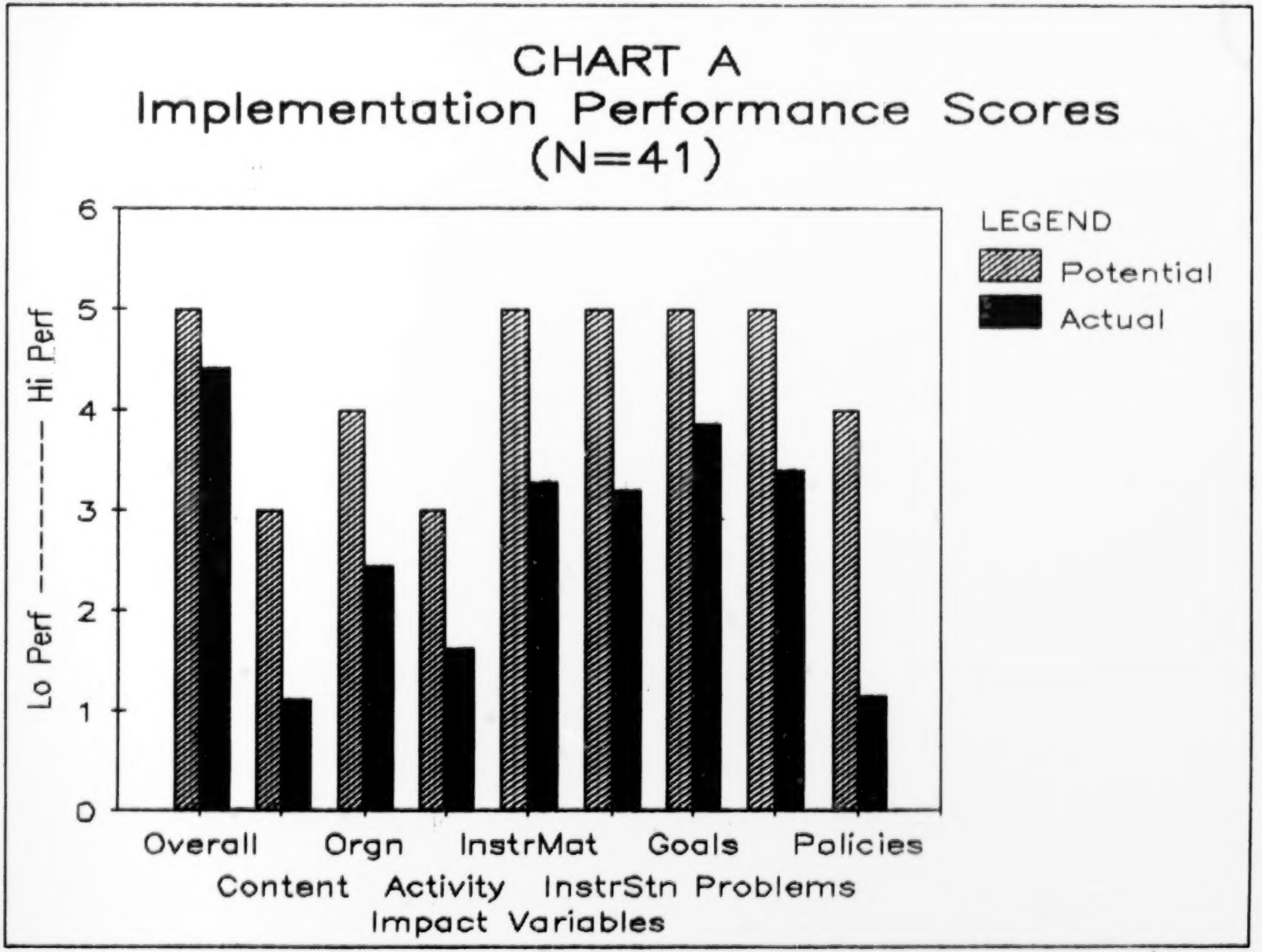


CHART A
Implementation Performance Scores
(N=41)
LEGEND
Potential
Actual
Lo Perf ------- Hi Perf
0
1
2
3
4
5
6
Overall
Orgn
InstrMat
Goals
Policies
Content
Activity
InstrStn
Problems
Impact Variables

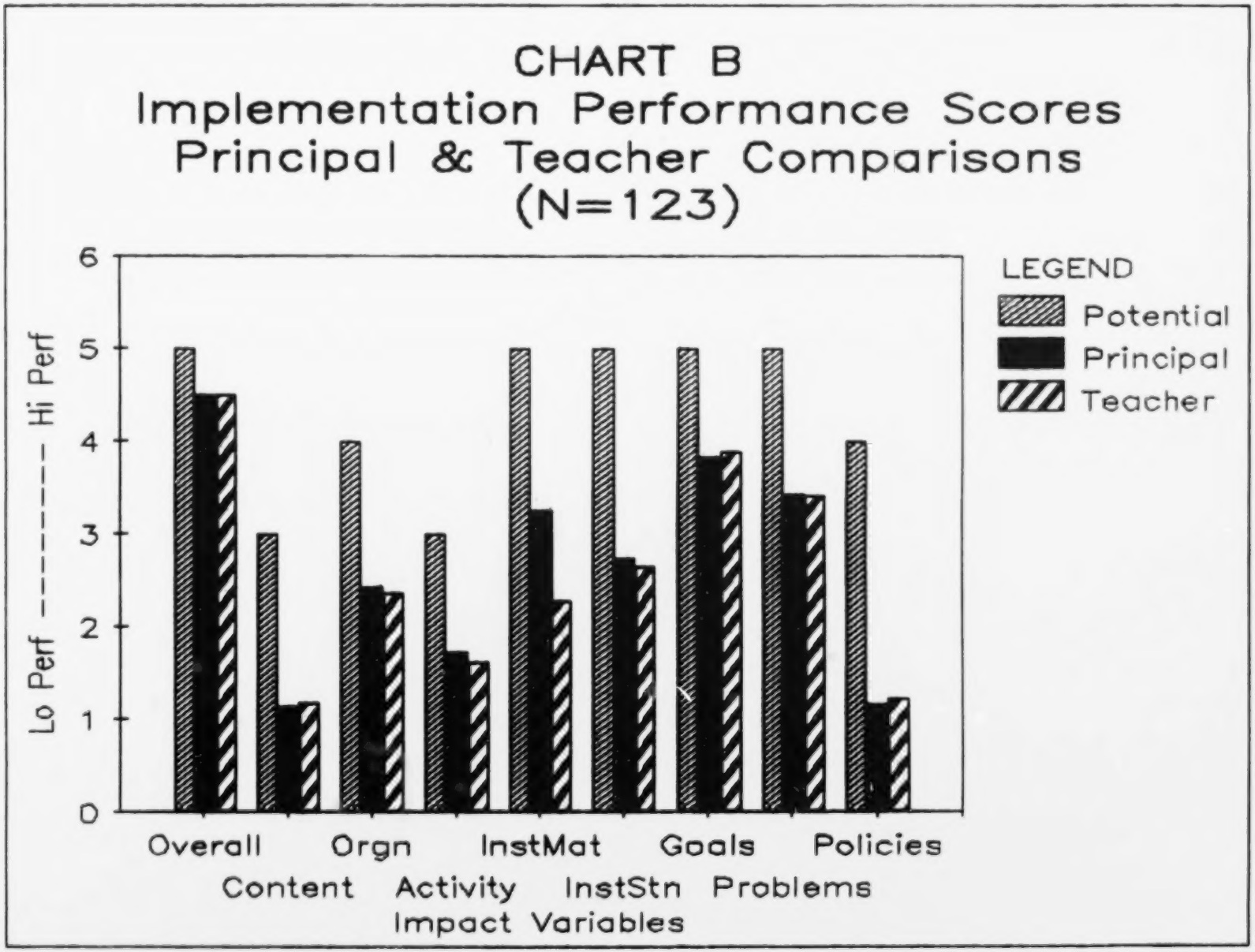
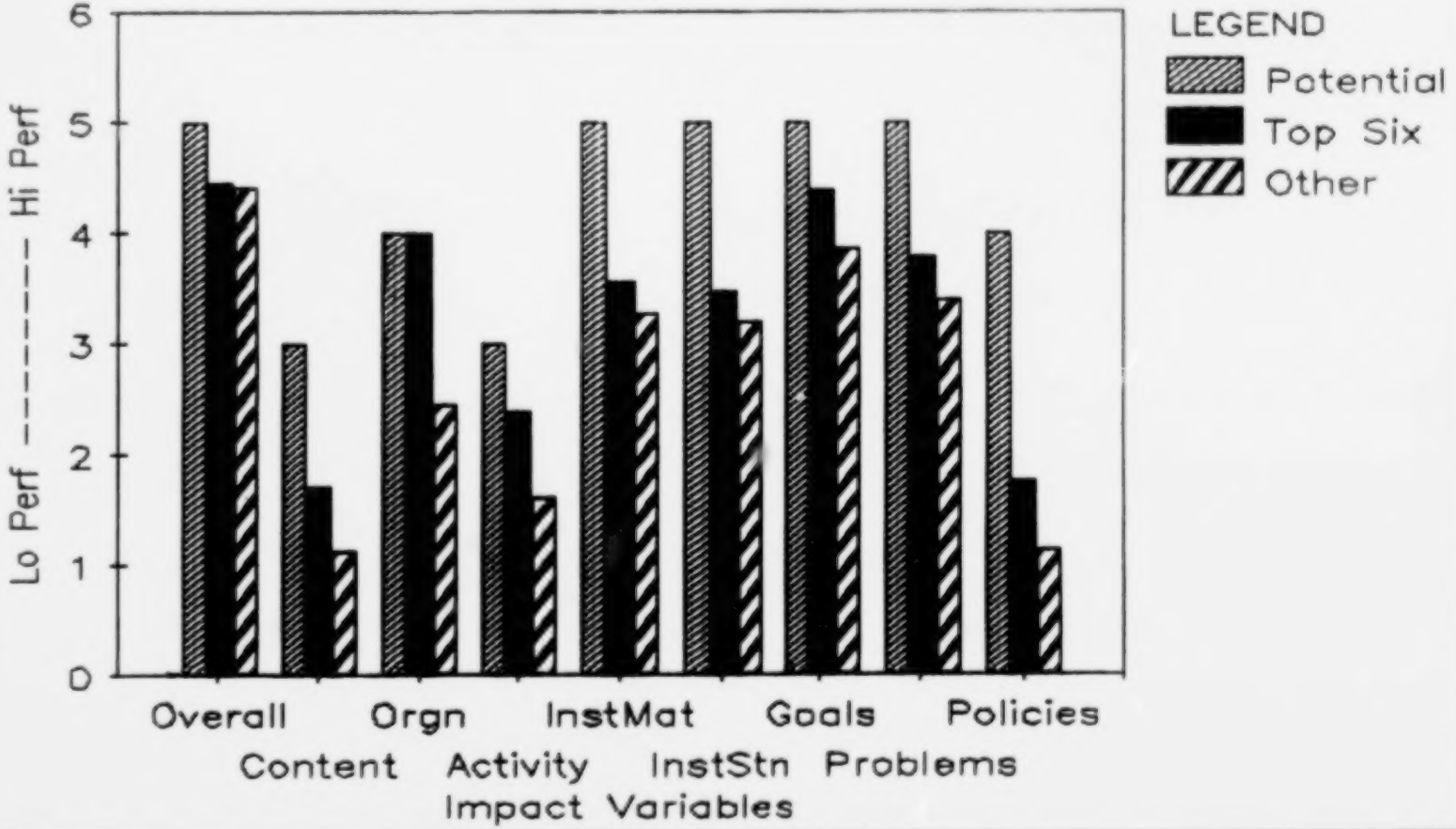


CHART B
Implementation Performance Scores
Principal & Teacher Comparisons
(N=123)
LEGEND
Potential
Principal
Teacher
Lo Perf ---------- Hi Perf
0
1
2
3
4
5
6
Overall
Orgn
InstMat
Goals
Policies
Content
Activity
InstStn
Problems
Impact Variables

# CHART C
## Implementation Performance Scores
## Top & Other Schools Comparison
## (N=41)



# CHART D
## Implementation Performance Scores
## NA Approach Comparisons
## (N=41)